10.01 Bond Terminology

A bond is a borrowing agreement in which the issuer promises to repay a certain amount of money (Face/Par value) to the purchaser, after a certain period of time (term), at a certain interest rate (Effective, Yield, Market rate). (ASC 470 and 835)

- **Term bond** – a bond that will pay the entire principal upon maturity at the end of the term.
- **Serial bond** – a bond in which the principal matures in installments.
- **Debenture bonds** – unsecured bonds that are not supported by any collateral.
- **Stated, face, coupon, nominal rate** – the rate printed on the bond. Represents the amount of cash the investor will receive every payment.
- **Carrying amount** – this is the net amount at which the bond is being reported on the issuer's balance sheet, and equals the face value of the bond plus the **premium** (when the bond was issued above face value) or minus the **discount** (when the bond was issued below face value) and minus any **bond issue costs**. It is also called the book value or reported amount. It will initially be the same as issue price, net of issue costs, but gradually approaches the face value as time passes, since the premium or discount and the bond issue costs are amortized as an adjustment to interest expense over the life of the bond.
- **Effective rate, Yield, Market Interest rate** – this is the actual rate of interest the issuer is paying on the bond based on the issue price. The effective rate is often called the market rate of interest or yield.
- When the bond is issued at a premium, the effective rate of interest will be lower than the stated rate, since the cash interest and principal repayment are based on face value, but the company actually received more money than that.
- When the bond is issued at a discount, the effective rate of interest will be higher than the stated rate, since the issuer must pay cash interest and principal based on a higher amount than the funds actually received upon issuance.
- **Convertible bond** – a bond that is convertible into common stock of the debtor at the bondholder's option.
- **Callable bond** – a bond which the issuer has the right to redeem prior to its maturity date.
- **Covenants** – restrictions that borrowers must often agree to.

When an entity issues bonds, or incurs any debt, it may incur costs in the form of fees paid to a financial institution, sometimes referred to as "points" or other fees, to an attorney for drawing up documents, or to regulators or others in order to be able to print up and issue its bonds. These costs, referred to as issue costs, are treated as a contra-liability, reducing the carrying value of the debt. Issue costs are amortized with the amortization treated as an adjustment to interest expense.

ASC 825 provides that a company may elect the fair value option for reporting financial assets and financial liabilities. If the fair value option is elected for a financial liability (bonds), the requirements of ASC 470 no longer apply. Instead, the financial liability is reported at fair value at the end of each reporting period, and the resulting gain or loss is reported in earnings of the period.

If an entity does not elect the fair value option, the bond is recorded at its issue price, and the effective interest method is used to amortize any premium or discount on the bond and any bond issuance costs. The remainder of this section will focus on the pricing of the bond using the effective interest method of amortizing a bond as required by ASC 470.

Issuance of Bonds (Examples)

Face value of bonds	$1,000,000
Term	5 years
Stated interest rate	8%
Effective rate/Market rate/Yield	**a)** 8%, **b)** 10%, **c)** 6% (3 examples)

a. Bond issued at **par value** where market rate of interest (8%) equals the stated rate (8%).

Cash	1,000,000	
Bonds Payable		1,000,000

Each year interest will be paid for $1,000,000 (face) × 8% (stated rate) = $80,000 per year

Interest expense	80,000	
Cash		80,000

b. Bond issued at a discount, since the stated rate of 8% is lower than the market rate of 10%, the only reason an investor would purchase this bond is if it would effectively yield 10%. To do so, the issuer must sell the bond at a **discount** (the actual cash proceeds must be precisely computed using present value factors and are only estimated in this journal entry).

Cash	900,000	
Discount	100,000	
Bonds Payable		1,000,000

The **discount must be amortized** over the life of the bond. Let's assume we are using straight-line amortization of $20,000 per year (100,000 / 5 years).

Interest expense	100,000	
Discount		20,000
Cash		80,000

c. Bond issued for a premium since the stated rate of 8% is higher than the Market rate of 6%. Investors are paying a **premium** to acquire this bond (the actual cash proceeds

must be precisely computed using present value factors and are only estimated in this journal entry).

Cash	1,100,000	
Premium		100,000
Bonds Payable		1,000,000

The premium must be amortized over the life of the bond. (100,000 / 5 years = 20,000)

Interest expense	60,000	
Premium	20,000	
Cash		80,000

The next consideration is how to calculate the proceeds from the issuance of the bonds. The above examples assumed the proceeds were given at 900,000 to 1,100,000. To calculate the **present value (PV) of the proceeds,** two amounts need to be PV.

- **PV of the Face** of the bonds (Face × PV of a lump sum using the effective interest rate)
- **PV of the interest** as an annuity (Face × stated rate × time = interest × PV of an Ordinary annuity at the effective interest rate)
  - The sum of these two amounts represents the PV of the bonds.
  - If **semi-annual** interest is being paid, take the years × 2 and the interest rate/2
    - Eg, 5-year bonds at 10% semi-annual. Use the PV table for 10 periods @ 5%.

In some circumstances, a problem will not require the use of present value to calculate the proceeds from issuance. It may instead express the sales price of the bond in terms of a **percentage of face value.**

- When bonds are issued at *101*, for example, the proceeds would be 101% of face value.
- If they are issued at *98*, the proceeds would be 98% of face value.